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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,110

10/22/2003

Johannes V. Baatrup

KN-69

5334

7590

11/15/2006

Friedrich Kueffner
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EXAMINER

WEINSTEIN, LEONARD J

ART UNIT

PAPER NUMBER

3746

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,110

Applicant(s)

BAATRUP ET AL.

Examiner

Leonard J. Weinstein

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/22/05 05/31/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show element 23 as a connecting path as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

2. In figure 1 it is unclear how element 23 provides a connection path as disclosed and element 31 is not clearly illustrated and appears to be in communication with element 17. Additionally element numerals are not clearly printed on figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. With respect to claim 1, the omitted structural cooperative relationships are: where the "first connection is arranged completely within a movement stroke of a high pressure piston". A movement stroke of said piston is not finitely defined and therefore does not define a structural limitation. With respect to claim 2, the omitted structural cooperative relationships are: "openings in a wall of the high-pressure cylinder" located outside of the high-pressure chamber. A range of motion for the piston is not clearly delimited therefore an area where wall openings are located, and independent of the position of high-pressure piston cannot be ascertained.

6. The term "predetermined position" in claim 3 is a relative term, which renders the claim indefinite. The term "predetermined position" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The degree to which the recess within the high-pressure piston overlaps the openings and where the top and bottom surfaces of said recess are located cannot be determined. Further the position of the openings

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relative to one another could not be ascertained. These structural details would affect when, how often, and the duration the claimed control valve switched and was in a particular switching position.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Iversen 6,295,914. Iversen '914 discloses the invention as substantially claimed including a pressure intensifier for fluids comprising an intensifier piston comprising a high-pressure piston 4 and a low-pressure piston 3 having a greater diameter than the high-pressure piston; a high-pressure cylinder 7, wherein the high-pressure piston is moveably arranged in the high-pressure cylinder; a low-pressure cylinder 6, wherein the low-pressure piston is moveably arranged in the low-pressure cylinder and wherein the high-pressure piston and the low-pressure piston move together 5; a high-pressure connection 11, wherein the high-pressure cylinder is connected 9 to the high pressure connection; a return connector T; a control valve 14 having a first switching position and a second switching position; a supply connector P; a first control line, P and 12, connected to the supply connector; a second control line 19 connected to the control valve; a first connection, 12 and 19 via 7, connecting the first and second control lines; wherein the low-pressure cylinder is connected via the control valve, 15 (P) and 24 via 25 and 17 of 14, in the first switching position to the supply connector and in the second switching position, to the

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return connector, 16 (R) and 24 via 25 and 17 of 14; wherein the first and second switching positions are controlled by a position of the intensifier piston, wherein the intensifier piston opens or closes the first connection between the first control line 12, and the second control line 19; wherein the first connection, 12 and 19 via 7, is arranged completely within a movement stroke of the high-pressure piston 4.

9. Claims 1, and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Baatrup 5,170,691. Baatrup '691 discloses the invention as substantially claimed including a pressure intensifier for fluids comprising an intensifier piston comprising a high-pressure piston 44 and a low-pressure piston 52 having a greater diameter than the high-pressure piston; a high-pressure cylinder 12, wherein the high-pressure piston is moveably arranged in the high-pressure cylinder; a low-pressure cylinder 18, wherein the low-pressure piston is moveably arranged in the low-pressure cylinder and wherein the high-pressure piston and the low-pressure piston move together 50; a high-pressure connection 14, wherein the high-pressure cylinder is connected 16 to the high pressure connection; a return connector 28; a control valve 24 having a first switching position and a second switching position; a supply connector 4; a first control line, 6 and 10, connected to the supply connector; a second control line 38 connected to the control valve; a first connection 42 connecting the first and second control lines; wherein the low-pressure cylinder is connected via the control valve, 36 and 22 via 24, in the first switching position to the supply connector and in the second switching position, to the return connector, 22 and 38 via 24, 20, and 26 ; wherein the first and second switching positions are controlled by a position of the intensifier piston, wherein the intensifier piston opens or closes the first connection 42 between the first control line, 6 and 10, and the second control line 38; wherein the first connection, 10 and 38 via 42, is arranged completely within a

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movement stroke of the high-pressure piston 44. Further Baatrup '691 discloses the pressure intensifier further comprising a throttled auxiliary control path 72 arranged in a valve element of the control valve, via 100, 98, 88 and 86, between the supply connector 28 and a control connector 40 of the control valve, wherein the auxiliary control path switches the control valve into the first switching position.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-9 are rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,776,080 B2 in view of Iversen '914. '080 discloses an intensifier substantially as claimed including a high-pressure piston and a low-pressure piston having a greater diameter than the high-pressure piston; separate high- and low-pressure cylinders where each piston is movably arranged and where the high-pressure cylinder is connected to a high-pressure connection; a return and supply connector, and a control valve having first and second switching positions. Further '080

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discloses the piston intensifier having two control lines separately connecting the intensifier to the supply connector and the control valve and a connection that puts the two control lines in communication with one another. Further '080 discloses a low pressure cylinder that is connected to the supply connector via the control valve when the valve is in one switching position and connected to the return connector when the valve is in the other of the two switching positions. The position of the control valve and the connection between the two control lines, being opened or closed, is controlled by the location of the intensifier. '080 discloses the connection between the control lines is formed through an annular recess in the intensifier piston, and is both opened and closed during a single stroke of the intensifier piston. The '080 claims additionally include a throttled auxiliary control path between the supply connector and the connector of the control valve within the valve element of the valve. '080 further discloses an embodiment of the intensifier piston having a seal arrangement, with a leakage drainage line, located on the high-pressure cylinder. '080 does not disclose that the control line connection recess located along a portion of the high-pressure piston within the bounds of the high-pressure chamber, which are not clearly defined in the present invention as noted above. Further '080 does not disclose an end face recess on the bottom portion of the low-pressure piston. The present invention moves the control line connection recess from a location on the low-pressure piston of '080 to a location along the high-pressure cylinder. The control line connection recess of '080 and the present invention, create a direct connection from the supply connector to a control chamber of the control valve that it is not in constant in connection with. Further each control line connection recess forms said connection when the intensifier piston is located at the bottom portion of the low-pressure cylinder and is starting its movement upwards thereby decreasing the volume of a high-pressure chamber. The end face

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recess claimed in the present invention creates a path/chamber that enables pressure, exerted by fluid from the supply connector, to be applied at all times on a surface area of the low-pressure piston. The end face of low-pressure piston of '080 does not come into abutment with lower end of the cylinder therefore a varying amount of pressure is applied to the bottom end face of the low-pressure piston without interruption. At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify '080 so that the control line connection recess be located on the high-pressure piston and to add a recess on the lower end-face on the low-pressure piston in order to reduce the size of the low-pressure piston and the overall size of the intensifier.

Further since in some respects (intensifier as in claims 1, 6, and 8-9) the claims of the present invention are broader than the claims of the '080 patent, someone making the invention claimed in the patent would be making the invention claimed in the present invention. Thus the claims of the present invention would represent an improper extension of the patent of '080.

12. Claims 1, and 8-9 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,170,691 in view of Iversen '914. Baatrup '691 discloses the invention as substantially claimed including a pressure intensifier for fluids comprising an intensifier piston comprising a high-pressure piston 44 and a low-pressure piston 52 having a greater diameter than the high-pressure piston; a high-pressure cylinder 12, wherein the high-pressure piston is moveably arranged in the high-pressure cylinder; a low-pressure cylinder 18, wherein the low-pressure piston is moveably arranged in the low-pressure cylinder and wherein the high-pressure piston and the low-pressure piston move together 50; a high-pressure connection 14, wherein the high-pressure

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cylinder is connected 16 to the high pressure connection; a return connector 28; a control valve 24 having a first switching position and a second switching position; a supply connector 4; a first control line, 6 and 10, connected to the supply connector; a second control line 38 connected to the control valve; a first connection 42 connecting the first and second control lines; wherein the low-pressure cylinder is connected via the control valve, 36 and 22 via 24, in the first switching position to the supply connector and in the second switching position, to the return connector, 22 and 38 via 24, 20, and 26 ; wherein the first and second switching positions are controlled by a position of the intensifier piston, wherein the intensifier piston opens or closes the first connection 42 between the first control line, 6 and 10, and the second control line 38; wherein the first connection, 10 and 38 via 42, is arranged completely within a movement stroke of the high-pressure piston 44. Further Baatrup '691 discloses the pressure intensifier further comprising a throttled auxiliary control path 72 arranged in a valve element of the control valve, via 100, 98, 88 and 86, between the supply connector 28 and a control connector 40 of the control valve, wherein the auxiliary control path switches the control valve into the first switching position.

Further since in some respects (intensifier as in claim 1) the claims of the present invention are broader than the claims of the '691 patent, someone making the invention claimed in the patent would be making the invention claimed in the present invention. Thus the claims of the present invention would represent an improper extension of the patent of '691.

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Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are cited on form 892 and attached herewith.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard J. Weinstein whose telephone number is 571-272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LJW

11/13/2006



**EHUD GARTENBERG
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